



TYCO 17812 (AT 20958-0012)
PATENT

Remarks

The Office Action mailed May 2, 2002 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-3, 5, 7-10, 12, 13, 15-19 and 21-23 are now pending in this application, of which Claims 7, 15 and 21 have been amended. It is respectfully submitted that the pending claims define allowable subject matter.

Claims 7, 15 and 21 have been amended for clarity.

The rejection of Claims 1, 3-5, 7-10, 12, 13, 15-19 and 21-23 under 35 U.S.C. § 103 as being unpatentable over Green et al. (U.S. Patent No. 5,348,488) in view of Okada (U.S. Patent No. 5,252,096) is respectfully traversed.

Preliminarily, Applicants note that the present § 103 rejections appear to be an impermissible hindsight reconstruction of the invention gleaned aspects of isolated teachings in the art in an attempt to deprecate the instantly claimed invention. Applicants note that any suggestion to combine the teaching of the art must come from the cited art itself, and not from the Applicants' disclosure in the specification. It is respectfully that the cited art, for the reasons set forth below, does not support the present rejection of the claims.

Claim 1 recites, among other things, a connector having a housing including a locking post configured to mate with reciprocal apertures formed in both a contact guide and a substrate "for securing both the contact guide and the substrate to the housing." The locking post has a base portion that is "secured within the reciprocal apertures in the contact guide" and having at least one bifurcated post with first and second opposed legs of different lengths which are compressible towards one another for insertion into the reciprocal aperture in the substrate. The locking post has "a locking feature on a distal end thereof, the locking feature being snapably secured within the reciprocal aperture in the substrate."

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Green et al. describes an electrical connector with a board-mounting alignment system having a housing (12) with a number of contacts (40) insertable into through holes (156) of a mother board (150). An aperture organizer (50) is provided for the contacts (40), and a pair of guide posts (80) extend from the housing (12). The guide posts (80) extend through apertures (58) and (59) in the organizer (50), and also through apertures (154) in the mother board (150). See Green et al. Figure 3.

The Office Action notes, correctly so, that Green et al. does not describe the guide posts (80) as being bifurcated posts having the features recited in Claim 1.

Applicants note, however, that Green et al. also fail to describe a locking post configured to secure "both the contact guide and the substrate to the housing" as recited in Claim 1. Rather, Green et al. illustrates the guide posts (80) as uniformly cylindrical posts having tapered leading ends (84) which are incapable of locking engagement to either of the organizer (50) or the motherboard (150). Green et al. describes securing of the housing (12) to a circuit element (100) only via soldering of contacts to terminals. See Green et al. col. 8, lines 23-53. It is submitted that Green et al. neither describes nor suggests any desirability or advantage to securing a housing, a contact guide, *and* a substrate to one another with a guide post having a locking feature as recited in Claim 1.

Okada describes a connector (11) having a retainer (10) for preventing terminals of the connector from being removed. The retainer includes U-shaped locking plates (18), (19) including respective claws (22) and (23). The claws (22) and (23) engage respective edges (14a), (14b) of the housing (12). See Okada col. 4, lines 14-22; col. 4, lines 54-67 and col. 5, lines 37-45.

Contrary to the assertion otherwise in the Office Action, the locking plates (18), (19) are not secured to a substrate, but rather to a housing. It is respectfully submitted that nothing in Okada suggests that coupling of a locking post to a substrate, as recited in Claim 1, would be desirable or advantageous.

It is respectfully submitted that the Green et al. and Okada collectively fail to teach or suggest each of the recitations recited in Claim 1. Neither of the references disclose or suggest a housing, a guide contact, and a substrate secured to one another via locking posts of the housing having a locking feature. Rather, Green et al. describes a housing, an organizer, and a circuit element secured together only with solder. The guide posts described by Green et al. are incapable of locking the assembly together, and a desirability of doing so is not suggested by Green et al. Okada describe locking plates which secure a terminal retainer to a housing, and do not describe securing the housing to a substrate.

For at least the reasons set forth above, Claim 1 is submitted to be patentable over Green et al. in view of Okada.

Likewise, the detail recitations of Claims 3-5 and 7-8, when considered in combination with the recitations of Claim 1, are also submitted to be patentable over Green et al. in view of Okada.

Claim 9 recites, among other things, a connector including a locking post having "a base portion securing the housing to the contact guide and having a distal portion with first and second opposed legs of different lengths that are compressible towards one another to allow the locking post to be inserted into the reciprocal aperture in the substrate, said distal portion snapably securing the housing to the substrate."

It is respectfully submitted that Green et al. in view of Okada neither describe nor suggest the connector recited in Claim 9. Neither Green et al. nor Okada disclose or suggest a housing, a guide contact, and a substrate secured to one another via a locking post as recited in Claim 9. Rather, Green et al. describes a housing, an organizer, and a circuit element secured together only with solder. The guide posts described by Green et al. are incapable of locking the assembly together, and a desirability of doing so is not suggested by Green et al. Okada describe locking plates which secure a terminal retainer to a housing, and do not describe securing the

housing to a substrate. It is respectfully submitted that the Green et al. and Okada collectively fail to teach or suggest each of the recitations recited in Claim 9.

Claim 9 is therefore submitted to be patentable over Green et al. in view of Okada.

Likewise, the detail recitations of Claims 10, 12-13 and 15-16, when considered in combination with the recitations of Claim 9, are also submitted to be patentable over Green et al. in view of Okada.

Claim 17 recites, among other things, a connector including "first and second posts extending from the housing, each of the first and second posts having a base portion configured to mate with a reciprocal aperture formed on the contact guide and a distal portion configured to snapably mate with a reciprocal aperture formed on the substrate for securing the housing to both the contact guide and the substrate, respectively, wherein each of the first and second posts has first and second opposed legs of different lengths that are compressible towards one another to allow the first and second posts to be inserted into reciprocal apertures in the substrate."

For the reasons set forth above, it is submitted that Green et al. in view of Okada neither describe nor suggest, as recited in Claim 17, first and second posts configured to secure the housing to both the contact guide and the substrate. Rather, neither of Green et al. nor Okada discloses or suggests a housing, a guide contact, and a substrate secured to one another via a first and second posts as recited in Claim 17. Rather, Green et al. describes a housing, an organizer, and a circuit element secured together with solder. The guide posts described by Green et al. are incapable of locking the assembly together, and a desirability of doing so is not suggested by Green et al. Okada describe locking plates which secure a terminal retainer to a housing, and do not describe securing the housing to a substrate. It is respectfully submitted that the Green et al. and Okada collectively fail to teach or suggest each of the recitations recited in Claim 17.

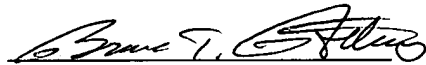
Claim 17 is therefore submitted to be patentable over Green et al. in view of Okada.

Likewise, the detail recitations of Claims 18-19 and 21-23, when considered in combination with the recitations of Claim 17, are also submitted to be patentable over Green et al. in view of Okada.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 1, 3-5, 7-10, 12, 13, 15-19 and 21-23 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



Bruce T. Atkins
Registration No. 43,476
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070

APPENDIX

(Versions with Markings to Show Changes Made)

IN THE CLAIMS

7. (once amended) An electrical connector as set forth in claim [6] 1, wherein at least one of the opposed legs includes a locking feature configured to lockingly engage with a bottom surface of the substrate when the opposed legs are inserted into the reciprocal aperture in the substrate.

15. (once amended) An electrical connector as set forth in claim [14] 9, wherein at least one of the opposed legs includes a locking feature configured to lockingly engage with a bottom surface of the substrate when the first and second legs are inserted into the reciprocal aperture in the substrate.

21. (Twice Amended) An electrical connector as set forth in claim [20] 17, wherein at least one of the first and second opposed legs of each post includes a locking feature on the distal end configured to lockingly engage against a bottom face of the substrate when the first and second legs are inserted into a reciprocal aperture in the substrate.